

SCUBA REGULATOR CONNECTOR USING A SEALED BALL SWIVEL

ABSTRACT OF THE DISCLOSURE

[001] A ball and socket-type swivel connector for use with second stage regulators used by scuba divers. The ball is made from a metal with good corrosion resistance. The ball is then held into a true position by two separate low friction bushings. The two bushings, "sandwich" the metal swivel ball with light assembly pressure. This is accomplished by machining or molding the same radius of the swivel ball into one side of each of the two low friction bushings. As system pressure increases, the ball is forced rearwards and the squeeze increases. No seawater can enter the swivel. No area exists for seawater to collect around the O-ring. The bushing occupies all of the available space except for the gap provided around the O-ring gland an area used to hold lubrication. The preferred embodiment uses a high grade stainless steel swivel ball, virgin Teflon bushing material and an internally lubricated low friction O-ring. A wiper ring boot, a ball and socket wiper that utilizes an outer boot as a wiper ring to keep sand and contamination out of the rotational mechanism of the comfort swivel.